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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,085	10/16/2001	David Bruce Isaksen	Wideband-105/Tank-195	5385

7590 08/10/2004

Law Offices of Boris G. Tankhilevich
Ste. A
536 N. Civic Drive
Walnut Creek, CA 94596

EXAMINER

VO, DON NGUYEN

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,085

Applicant(s)

ISAKSEN ET AL.

Examiner

DON N VO

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) 20, 34-37 and 41-45 is/are rejected.
- 7) ☒ Claim(s) 21-33 and 38-40 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3 & 7</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20, 34-37 and 41-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Jablon (IEEE entitled "Joint Blind Equalization, Carrier Recovery, and Timing Recovery for High-Order QAM Signal Constellations").

Regarding claims 20, 34, 37, and 41-45, Jablon, as shown in figures 2-6, teaches a Joint Blind Equalization, Carrier Recovery, and Timing Recovery for High-Order QAM Signal Constellations comprising means for sampling (A/D), means for recovering (Timing Recovery, Recovered Sampling Clock), means for obtaining (Equalizer), means for locating (Slicer), means for obtaining (Fig. 5, Phase Discriminator), means for translating (Fig. 5, Phase Discriminator), means averaging (Fig. 5, Loop Filter) and means for inserting (Fig. 5, Multiplier). See also sections III, IV and VI.

Regarding claims 35 and 36, Jablon further teaches switching between Decision-Direct Equalization (DD) mode and Blind Equalization mode. See section III of the document.

Allowable Subject Matter

3. Claims 1-19 are allowed.
4. Claims 21-33, and 38-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References Wang et al (5,386,239), Strolle et al (5,894,334), Lin et al (US 2003/0058967) and Endres et al (6,668,014) are cited because they are pertinent to QAM receiver with equalizer, timing recovery and carrier recovery.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N VO whose telephone number is (703) 308-0158. The examiner can normally be reached on MON - FRI (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOHAMMAD GHAYOUR can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DON N VO
Primary Examiner
Art Unit 2631